IN THE ABSTRACT OF THE DISCLOSURE:

Please replace the original abstract with the following new abstract:

A plasma processing method for providing plasma processing to an object to be processed disposed within a vacuum processing chamber in which a process gas feeding device feeds process gas into the vacuum processing chamber, a wafer electrode is placed within the vacuum processing chamber for mounting the object to be processed, a wafer bias power generator applies self-bias voltage to the wafer electrode, and a plasma generator generates plasma within the vacuum processing chamber. The plasma processing method flattens either a positive side voltage or a negative side voltage of a voltage waveform of a high frequency voltage generated to the object at an arbitrary voltage.